

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/750,262  
Source: \_\_\_\_\_  
Date Processed by STIC: \_\_\_\_\_

***ENTERED***



IFWO

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/750,262

DATE: 12/03/2004

TIME: 07:19:56

Input Set : N:\Crf3\RULE60\10750262.raw.txt  
 Output Set: N:\CRF4\12032004\J750262.raw

1 <110> APPLICANT: Daniel E. Afar  
 2       Rene S. Hubert  
 3       Kahan Leong  
 4       Arthur B. Raitano  
 5       Douglas C. Saffran  
 6       Steve Chappell Mitchell  
 7 <120> TITLE OF INVENTION: NOVEL SERPENTINE TRANSMEMBRANE ANTIGENS  
 8       EXPRESSED IN HUMAN CANCERS AND USES THEREOF  
 9 <130> FILE REFERENCE: 129.16USU2  
 10 <140> CURRENT APPLICATION NUMBER: US/10/750,262  
 11 <141> CURRENT FILING DATE: 2003-12-31  
 12 <150> PRIOR APPLICATION NUMBER: US/09/323,873  
 13 <151> PRIOR FILING DATE: 1999-06-01  
 14 <150> PRIOR APPLICATION NUMBER: 60/087,520  
 15 <151> PRIOR FILING DATE: 1998-06-01  
 16 <150> PRIOR APPLICATION NUMBER: 60/091,183  
 17 <151> PRIOR FILING DATE: 1998-06-30  
 18 <160> NUMBER OF SEQ ID NOS: 32  
 19 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 1195  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Homo Sapiens  
 25 <400> SEQUENCE: 1  
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 27       aattaatgga   aagcagaaaa gacatcacaa accaagaaga actttggaaa atgaagccta   120  
 28       ggagaaattt   agaagaagac gattatttgc ataaggacac gggagagacc agcatgctaa   180  
 29       aaagacctgt   gctttgcat ttgcacccaa cagccatgc tcatgttgc gactgccctt   240  
 30       cagaacttca   gcacacacag gaactcttgc cacagtggca cttgccaatt aaaatagctg   300  
 31       ctattatagc   atctctgact tttctttaca ctcttgc ggaagtaatt caccctttag   360  
 32       caacttccca   tcaacaatat tttataaaaa ttccaaatcct ggtcatcaac aaagtcttgc   420  
 33       caatggtttc   catcaacttc ttggcattgg tttacctgcc aggtgtgata gcagcaattt   480  
 34       tccaaacttca   taatggaaacc aagtataaga agtttccaca ttgggtggat aagtggatgt   540  
 35       taacaagaaa   gcagtttggg cttctcagtt tctttttgc tgcactgtcat gcaatttata   600  
 36       gtctgtctta   cccaatgggg cgatcctaca gatacaagtt gctaaaactgg gcatatcaac   660  
 37       aggtccaaca   aaataaaagaa gatgccttggaa ttgagcatga tttttggaga atggagattt   720  
 38       atgtgtctct   ggaaatttggt ggattggcaa tactggctct gtggctgtg acatcttac   780  
 39       catctgttag   tgactcttgc acatggagag aatttcaacta tattcagagc aagctaggaa   840  
 40       ttgtttccct   tctactgggc acaatacacg cattgatttt tgccctggaaat aagtggatag   900  
 41       atataaaaaca   atttgtatgg tatacacctc caacttttat gatagctgtt ttccttccaa   960  
 42       ttgttgtcct   gatattttaaa agcatactat tcctgcacatg cttgaggaaag aagataactga   1020  
 43       agattagaca   tggttggaa gacgtcacca aaattaacaa aactgagata tggtcccaagt   1080  
 44       tgtagaatta   ctgtttacac acatttttgt tcaatattga tatattttat caccaacatt   1140

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Input Set : N:\Crf3\RULE60\10750262.raw.txt  
 Output Set: N:\CRF4\12032004\J750262.raw

45 tcaagttgt atttgttaat aaaatgatta ttcaaggaaa aaaaaaaaaa aaaaaa 1195  
 47 <210> SEQ ID NO: 2  
 48 <211> LENGTH: 339  
 49 <212> TYPE: PRT  
 50 <213> ORGANISM: Homo Sapiens  
 51 <400> SEQUENCE: 2  
 52 Met Glu Ser Arg Lys Asp Ile Thr Asn Gln Glu Glu Leu Trp Lys Met  
 53 1 5 10 15  
 54 Lys Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr Leu His Lys Asp Thr  
 55 20 25 30  
 56 Gly Glu Thr Ser Met Leu Lys Arg Pro Val Leu Leu His Leu His Gln  
 57 35 40 45  
 58 Thr Ala His Ala Asp Glu Phe Asp Cys Pro Ser Glu Leu Gln His Thr  
 59 50 55 60  
 60 Gln Glu Leu Phe Pro Gln Trp His Leu Pro Ile Lys Ile Ala Ala Ile  
 61 65 70 75 80  
 62 Ile Ala Ser Leu Thr Phe Leu Tyr Thr Leu Leu Arg Glu Val Ile His  
 63 85 90 95  
 64 Pro Leu Ala Thr Ser His Gln Gln Tyr Phe Tyr Lys Ile Pro Ile Leu  
 65 100 105 110  
 66 Val Ile Asn Lys Val Leu Pro Met Val Ser Ile Thr Leu Leu Ala Leu  
 67 115 120 125  
 68 Val Tyr Leu Pro Gly Val Ile Ala Ala Ile Val Gln Leu His Asn Gly  
 69 130 135 140  
 70 Thr Lys Tyr Lys Phe Pro His Trp Leu Asp Lys Trp Met Leu Thr  
 71 145 150 155 160  
 72 Arg Lys Gln Phe Gly Leu Leu Ser Phe Phe Phe Ala Val Leu His Ala  
 73 165 170 175  
 74 Ile Tyr Ser Leu Ser Tyr Pro Met Arg Arg Ser Tyr Arg Tyr Lys Leu  
 75 180 185 190  
 76 Leu Asn Trp Ala Tyr Gln Gln Val Gln Gln Asn Lys Glu Asp Ala Trp  
 77 195 200 205  
 78 Ile Glu His Asp Val Trp Arg Met Glu Ile Tyr Val Ser Leu Gly Ile  
 79 210 215 220  
 80 Val Gly Leu Ala Ile Leu Ala Leu Ala Val Thr Ser Ile Pro Ser  
 81 225 230 235 240  
 82 Val Ser Asp Ser Leu Thr Trp Arg Glu Phe His Tyr Ile Gln Ser Lys  
 83 245 250 255  
 84 Leu Gly Ile Val Ser Leu Leu Leu Gly Thr Ile His Ala Leu Ile Phe  
 85 260 265 270  
 86 Ala Trp Asn Lys Trp Ile Asp Ile Lys Gln Phe Val Trp Tyr Thr Pro  
 87 275 280 285  
 88 Pro Thr Phe Met Ile Ala Val Phe Leu Pro Ile Val Val Leu Ile Phe  
 89 290 295 300  
 90 Lys Ser Ile Leu Phe Leu Pro Cys Leu Arg Lys Lys Ile Leu Lys Ile  
 91 305 310 315 320  
 92 Arg His Gly Trp Glu Asp Val Thr Lys Ile Asn Lys Thr Glu Ile Cys  
 93 325 330 335  
 94 Ser Gln Leu

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Input Set : N:\Crfs3\RULE60\10750262.raw.txt  
Output Set: N:\CRE4\12032004\J750262.raw

96 <210> SEQ ID NO: 3  
97 <211> LENGTH: 111  
98 <212> TYPE: DNA  
99 <213> ORGANISM: Homo Sapiens  
100 <400> SEQUENCE: 3  
101 ggccggaggcg gaggcgagg gcgagggcg gggagcgccg cctggagcgc ggcaggcat 60  
102 attgaacatt ccagataacct atcattactc gatgctgtt gataacagcaa g 111  
104 <210> SEQ ID NO: 4  
105 <211> LENGTH: 24  
106 <212> TYPE: DNA  
107 <213> ORGANISM: Artificial Sequence  
108 <220> FEATURE:  
109 <223> OTHER INFORMATION: RT-PCR primer 8P1D4.1  
110 <400> SEQUENCE: 4  
111 actttgttga tgaccaggat tggaa 24  
113 <210> SEQ ID NO: 5  
114 <211> LENGTH: 24  
115 <212> TYPE: DNA  
116 <213> ORGANISM: Artificial Sequence  
117 <220> FEATURE:  
118 <223> OTHER INFORMATION: RT-PCR primer 8P1D4.2  
119 <400> SEQUENCE: 5  
120 cagaacttca gcacacacag gaac 24  
122 <210> SEQ ID NO: 6  
123 <211> LENGTH: 3627  
124 <212> TYPE: DNA  
125 <213> ORGANISM: Homo Sapiens  
126 <400> SEQUENCE: 6  
127 gggccccgc cctctggca gcagcgccag ccgagactca cggtaagct aaggcgaaga 60  
128 gtgggtggct gaagccatac tattttatag aattaatgg aaggcagaaaa gacatcacaa 120  
129 accaagaaga actttggaaa atgaagccta ggagaaattt agaagaagac gattattgc 180  
130 ataaggacac gggagagacc agcatgctaa aaagacctgt gctttgcatt ttgcacaaa 240  
131 cagcccatgc tgatgaattt gactgcccatt cagaacttca gcacacacag gaactcttc 300  
132 cacagtggca cttgccaatt aaaatagctg ctattatagc atctctgact tttctttaca 360  
133 ctcttctgag ggaagtaatt cacccttag caactccca tcaacaatattttataaaaa 420  
134 ttccaaatccct ggtcatcaac aaagtcttgc caatggtttccatcactctc ttggcattgg 480  
135 tttacctgccc aggtgtgata gcagcaattt tccaaacttca taatggaaacc aagtataaga 540  
136 agtttccaca ttgggtggat aagtggatgt taacaagaaaa gcagtttggg cttctcagtt 600  
137 tctttttgc tgtactgcat gcaatttata gtctgtctta cccaaatgggg cgatcctaca 660  
138 gatacaagtt gctaaactgg gcatatcaac aggtccaaca aaataaaagaa gatgcctgg 720  
139 ttgagcatga tggggatggatggatgtt atgtgtctt gggaaattgtg ggattggcaa 780  
140 tactggctct gttggctgtg acatcttattc catctgtgag tgactctttg acatggagag 840  
141 aatttcacta tattcaggtt aataatataat aaaataaccc taagaggtaa atcttcttt 900  
142 tgggtttatg atatagaata tggactttt accccataaa aaataacaaa tgggttcaaa 960  
143 cagcaaagat cttataacttgc ttccaaattaa taatgtgtc tcctgtt gtttgcatttgc 1020  
144 cttcttaattt ggacaagtgt ttccttagaca taaataaaag gcattaaaat attcttgcatttgc 1080  
145 tttttttttt tgggttttgc ttggatggatgtt gtttgcatttgc tttttgcatttgc tgggttcaaa 1140  
146 ctctgttgcatttgc catgctggag tacagtggca cgatctcgcc tcactgcaac ctgcgcctcc 1200  
147 tgggttgcatttgc cttttttttt tgggttcaaa 1260

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TIME: 07:19:56

Input Set : N:\CrF3\RULE60\10750262.raw.txt  
Output Set : N:\CRE4\12032004\1750262.raw

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148 accatgtcca gctaattttt gtatTTTtag tagagacagg gtttcccattt gttggccagg 1320
149 ctggctcga ttcctgacc tcaaATgatc cggccacctc ggccTcccAA agtgcTgggA 1380
150 tgacagttgt gagccaccac actcagcctg ctcttctaa tatttgaAAac ttgttagaca 1440
151 attgttacc catctaATgt gatattttAG gaatccaata tgcatggTTt attatttctt 1500
152 aaaaaaaaata ttctttacc tgcacCTGA atttagtaat gcctttatG ttacacaACT 1560
153 tagcacttcc cagaaACAAA aactctctcc ttGAaATAAT agAGTTTtA tctacAAAG 1620
154 atatgtAGt gtctcatttC aaaggctgCT tttccAGt tacattttat atacttACT 1680
155 acttGAAGtt tctaaATatt ctgtAattt taaaACTATC tcaGATTAC tgaggTTt 1740
156 ctTCTGGTGG tagattatCC ataAGAAAGAG tgatgtGCCA gaATcACTtC gggatcCTtG 1800
157 tctgacaAGA ttcaaAGGAC taaATTtAAT tcAGTcATGA acACTGCCA ttacCGTTA 1860
158 tggtagaca tctttgAAA ttccACAAAG gtcAGACATT CGCAACTATC ccttCTACAT 1920
159 gtcCACACGT atactCCAAC acTTTATTAG gcatCTGATT agTTTGGAAA gtagCCTCC 1980
160 atctgaATTt gtccAGTGTG gcttagAGTT ggtacaACAT tctcacAGAA tttcCTAATT 2040
161 ttgtAGGTTc agcCTGATAA ccACTGGAGT tcttGGTCC tcattAAATA gcttCTTCA 2100
162 cacattGTC tgcCTGTTAC acATATGATG aacACTGTT tttagACTtC attAGGAATT 2160
163 taggACTGCA tcttgACAAc ttagCCTATT ctACTATATG tacaATAACt agCCATAAT 2220
164 aggtataCAA tacACATTG gtaAAACTAA tttcaACCA atgACATGTA ttttCAACT 2280
165 agtaACCTAG aaATGTTCA ctAAAATCT gagaACTGGT tacACTACAA gttacCTTGG 2340
166 agattcATAAt atgAAAACGC aaACTTAGCT atttGATTGT attcACTGGG acttAAAGAT 2400
167 ggcCCTGAAT aattGTGAGT tcgATTGTT ctggcAGGCT aatgaccATT tccAGTAAAG 2460
168 tgaATAGAGG tcagaAGTcG tataAAAGAG gtttGTTcAG aacaccGTG agattACATA 2520
169 ggtGAACAAc tattttAAG caACTTTATT tttGTTAGtGA caaAGCATCC caatgcAGGC 2580
170 tgaATGTTt catcacatCT ctggatCTtCt ctatttGtG cagACATTG AAAAAATTGTT 2640
171 catatttATTt ccatGTTATC agaATATTG ttttttAAa aacatAGGCC aagtTCATTc 2700
172 acTTcATTt tcatttATCA aatCAGAGT gaATCACATT agTCGCTTC acaACTGATA 2760
173 aagatCACTG aagtCAAATT gatTTTGTcT ataatCTCA atCTACCTAT atttAAATTG 2820
174 gaatCTAAATt tttGACAAATC atttGTTGA ttctGAGtG atcCTGCTAT aagtAAAGACT 2880
175 cagTCCCTGA ttttaggtAT cctGtGAAAAG gCAGAAATTAA gacaAAATACA caAGAGACAA 2940
176 agcACAAAAt aaaaATATCA taAGGGGATG aacAAATGG tggAGAAAGA gtagACAAAG 3000
177 ttttGATCA cctgcCTTCA aagAAAGGCT gtaATTtG ttcACTTGA cagCTTGGAG 3060
178 acaAGAAATTt acccAAAGt aaggTgAGGA ggatAGGCA aAAGAGCAGA aagATGTGAA 3120
179 tggACATTGT tgAGAAATGT gatAGGAAAA caatCATAGA taaAGGATTt ccaAGCAAC 3180
180 gagCATATCC agatGAGGTA ggatGGGATA aactCTTATT gaACCAATCT tcACCAATT 3240
181 ttttttCTT ttgcAGAGCA agCTAGGAAT ttttCCCTT ctACTGGCA caataCACGC 3300
182 attGATTTTt gcctGGAATA agtGGATAGA tataAAACAA tttGtATGTT atacACCTCC 3360
183 aactTTTATG atagCTGTT tcctTCCAT tttGTTcCTG atatttAAAGA gCATACTATT 3420
184 cctGCCATGC ttGAGGAAGA agataCTGAA gatAGACAT gtttGGGAAG acgtCACC 3480
185 aattaACAAA actGAGATAT gttcccAGTT gtagAAATTAC ttttACACCA cattttGTT 3540
186 caatATTGAT atatttATC accAACATTt caAGTTGTA tttGTTAATA aaATGATTAT 3600
187 tcaAGGAAAA aaaaaaaaA aaaaaaaa 3627
188 <210> SEQ ID NO: 7
189 <211> LENGTH: 521
190 <212> TYPE: DNA
191 <213> ORGANISM: Homo Sapiens
192 <214> LENGTH: 521
193 <400> SEQUENCE: 7
194 tgacttttac aaaattccta tagagattgt gaataAAACC ttacCTATAG ttGCCATTAC 60
195 tttgctctcc cttagtatacc tcgcAGGTCT tctGGCAGCT gcttATCAAC tttattACGG 120
196 caccaAGTAT aggAGATTC cacCTGGTT ggAAACCTGG ttACAGTGTa gaaaACAGCT 180
197 tggattacta agtttttttct tcgctatGGT ccatGTTGCC tacAGCCTCT qcttaccqat 240

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Input Set : N:\Crf3\RULE60\10750262.raw.txt  
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198 gagaaggta gagaatatt tgtttctcaa catggctat cagcaggta atgcaaata 300  
 199 tggaaaactct tggaatgagg aagaagttt gagaattgaa atgtataatct cctttggcat 360  
 200 aatgagccctt ggcttacttt ccctcctggc agtcaacttct atcccttcag tgagcaatgc 420  
 201 tttaaaactgg agagaattca gtttattca gtctacactt ggatatgtcg ctctgctcat 480  
 202 aagtactttc catgtttaa tttatggatg gaaacgagct t 521  
 204 <210> SEQ ID NO: 8  
 205 <211> LENGTH: 173  
 206 <212> TYPE: PRT  
 207 <213> ORGANISM: Homo Sapiens  
 208 <400> SEQUENCE: 8  
 209 Asp Phe Tyr Lys Ile Pro Ile Glu Ile Val Asn Lys Thr Leu Pro Ile  
 210 1 5 10 15  
 211 Val Ala Ile Thr Leu Leu Ser Leu Val Tyr Leu Ala Gly Leu Leu Ala  
 212 20 25 30  
 213 Ala Ala Tyr Gln Leu Tyr Tyr Gly Thr Lys Tyr Arg Arg Phe Pro Pro  
 214 35 40 45  
 215 Trp Leu Glu Thr Trp Leu Gln Cys Arg Lys Gln Leu Gly Leu Leu Ser  
 216 50 55 60  
 217 Phe Phe Phe Ala Met Val His Val Ala Tyr Ser Leu Cys Leu Pro Met  
 218 65 70 75 80  
 219 Arg Arg Ser Glu Arg Tyr Leu Phe Leu Asn Met Ala Tyr Gln Gln Val  
 220 85 90 95  
 221 His Ala Asn Ile Glu Asn Ser Trp Asn Glu Glu Glu Val Trp Arg Ile  
 222 100 105 110  
 223 Glu Met Tyr Ile Ser Phe Gly Ile Met Ser Leu Gly Leu Leu Ser Leu  
 224 115 120 125  
 225 Leu Ala Val Thr Ser Ile Pro Ser Val Ser Asn Ala Leu Asn Trp Arg  
 226 130 135 140  
 227 Glu Phe Ser Phe Ile Gln Ser Thr Leu Gly Tyr Val Ala Leu Leu Ile  
 228 145 150 155 160  
 229 Ser Thr Phe His Val Leu Ile Tyr Gly Trp Lys Arg Ala  
 230 165 170  
 232 <210> SEQ ID NO: 9  
 233 <211> LENGTH: 322  
 234 <212> TYPE: DNA  
 235 <213> ORGANISM: Homo Sapiens  
 236 <400> SEQUENCE: 9  
 237 ggtcgacttt tcctttattc ctttgcaga gatctgattc atccatatgc tagaaaccaa 60  
 238 cagagtgact ttacaaaat toctatagag attgtgaata aaaccttacc tatagttgcc 120  
 239 attactttgc tctccctagt ataccttgc ggtctctgg cagctgctta tcaactttat 180  
 240 tacggcacca agtataaggat atttccaccc tggttggaaa cctggttaca gtgtagaaaa 240  
 241 cagcttggat tactaagttt ttcttcgct atggtccatg ttgcctacag cctctgctta 300  
 242 ccgatgagaa ggtcagagag at 322  
 244 <210> SEQ ID NO: 10  
 245 <211> LENGTH: 180  
 246 <212> TYPE: DNA  
 247 <213> ORGANISM: Homo Sapiens  
 248 <400> SEQUENCE: 10  
 249 ttgcagctt tgcagatacc cagactgagc tggaaactgga atttgcattc ctattgactc 60

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/03/2004  
PATENT APPLICATION: US/10/750,262 TIME: 07:19:58

Input Set : N:\Crf3\RULE60\10750262.raw.txt  
Output Set: N:\CRF4\12032004\J750262.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:12; N Pos. 11,56,233,250,310,326,377,398

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/750,262

DATE: 12/03/2004

TIME: 07:19:58

Input Set : N:\Crf3\RULE60\10750262.raw.txt  
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L:276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
M:341 Repeated in SeqNo=12